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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,113	02/05/2007	Werner Fuchs	P29981	1651
7055 7590 10/29/2009 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER				
FORTUNA, ANA M				
ART UNIT		PAPER NUMBER		
1797				
NOTIFICATION DATE		DELIVERY MODE		
10/29/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
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Office Action Summary

Application No.

10/582,113

Applicant(s)

FUCHS ET AL.

Examiner

ANA M. FORTUNA

Art Unit

1797

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)
- Paper No(s)/Mail Date 11/30/07, 2/5/07
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "more than one" vessel9(s), more than one "feed space", "more than one feed distribution space" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Claim 14 and dependent claims are directed "at least one" referring to the elements discussed above, and the figures and specification supports only "one" vessel, etc.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-18, 19, 20, 21, 25, 26, 27, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/26363 in view of EP 0734758 A1 and WO 00/20104. Reference '363, discussed in current specification, teaches a tubular filter module within a housing separated by plates and defining a plurality of spaces within the housing, e.g feed space, filtrate space and retentate space, and aeration device (figures 1 and 2, elements 22, 23, 24, 21, 20, 41, 42, 51, 52, 11, 7). Reference '363 fails to each positioning the feed tank, or "feed distribution space" laterally and at least partially surrounding the feed space. EP'758 teaches providing the feed tank or feed space around the feed inlet to a feed space in an aerated filtration module (elements 110, 3, 301). Claim 1 also requires that the plurality of filter elements is "removable", which is not discussed in '363 or '748. Reference '104 teaches tubular filter elements within a vessel and separated into spaces (feed, retentate and permeate spaces) and wherein the tubular filters can be removed from the plates (3.1, 3.3) by removing the screws

holding the filter element (Figures 1-3). The skilled in this art at the time this invention was made would have been motivated to provide the filter of '363 with modules that can be removed from the housing, e.g. to facilitate filter replacement. By selecting the feed distribution space (tank 3) of reference '758, the skilled artisan can predict a reduction in piping in the system.

As to claim the structure of claims 15-18 is covered by the discussion of '363. As to claim 19, the tap-off device (or outlet) is represented by element (301).

The air pulse or air supply elements are disclosed in '363 (elements 51, 52).

The method of operating the system for filtering a liquid while discharging gas in the feed space is disclosed in '363.

As to claim 25, the filter units are identical (see figures in '363).

As to claims 26-28 reference '363 teaches using the tubular membrane unit for filtering a suspension (abstract) in connection to the apparatus of figures 1-3.

Claims 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 02/26363, of EP 0734758 A1 and WO 00/20104 as applied to the claims above, and further in view of Ando et al (US 6,733,675) and Rabie et al (US 6,881,343). The process of cleaning the membrane other than air or gas is not disclosed in the documents above. Patent'675 teaches conventional methods for cleaning membranes, as applied to spiral wound; however these techniques also apply to tubular membranes and hollow fibers (column 7, line 35 through column 9, line 61).

Rabie et al ('343) discloses an aerator for providing air or gas to a membrane for cyclic cleaning or gas pulse, by controlling the gas discharge (column 8, lines 17-34).

It would have been obvious to one skilled in this art at the time the invention was made to use a constant air injection or intermittent by using a diffuser with a control for discharging gas as suggested in '343.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reference 4,414,113 teaches backwashing tubular filters with water or gas.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANA M. FORTUNA whose telephone number is (571)272-1141. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on 571-272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANA M FORTUNA/
Primary Examiner, Art Unit 1797